LETTERS TO THE EDITOR

Regarding "Bypass graft to the midpopliteal artery with a combined anterior and posterior approach"

We read with keen interest the article by Dr Gradman and his colleagues on bypass graft to the midpopliteal artery with a combined anterior and posterior approach (J Vasc Surg 2001;33:888-94). At our institution, if the midpopliteal artery is preferable to the distal popliteal artery as an anastomotic site, we approach it through a medial supragenicular incision close to the knee. After exploration of the proximal popliteal artery with the standard technique, the knee is flexed 90° or more and externally rotated at a 30° to 45° angle with the patient still in the supine position. This position allows further dissection of popliteal artery distally. While the knee is flexed 90° or more, the midportion of the popliteal artery is easily mobilized, and this significantly extends the exposure of the medial supragenicular incision. In this position, minimal effort is needed to complete distal anastomosis to the midpopliteal artery, and in thin patients even the distal popliteal artery is accessible by this way. After the leg is straightened, the graft is drawn through the tunnel and the proximal anastomosis is completed. We think that this approach is easier and safer.

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Reply

We thank Drs Sunar and Duran for reaffirming our plea to implant grafts on the most favorable popliteal segment possible. Although we always flex and externally rotate the knee to gain distal access to the popliteal artery, we confess that in any given patient, no matter how thin or limber, we cannot predict how far into the fossa we can safely dissect without the need to divide the gastrocnemius muscle. Any surgeon who has harvested a continuous segment of superficial femoral and popliteal vein through infragenicular and supragenicular incisions can attest to a 5- to 6-cm segment of inhospitable mid-knee terrain. Indeed, Dr Shulman often divided the medial tendons and muscles to access this vein segment.[1] Branchereau divided the hamstrings to access the midpopliteal artery.[2]

The drawbacks of stubbornly pursuing the supragenicular approach ever deeper into the popliteal fossa are the following: (1) one must work at the apex of a progressively narrower cone; (2) reentry branches must be divided to optimize exposure; (3) the implantation site may be curved with the knee flexed; (4) extension of the arteriotomy is compromised if a diseased segment is encountered; (5) one can never be sure that a thigh pressure tourniquet will achieve hemostatic control, while use of a distal vessel loop is awkward; and (6) the approach should not be used when treating an infected femoral-supragenicular popliteal bypass graft.

The posterior approach to the midpopliteal artery eliminates these obstacles in exchange for the inconvenience and risk of turning the patient to the prone position. Our results show the risk to be minimal, so we believe the tradeoff is worthwhile. Furthermore, although difficult to prove clinically, we are convinced that the posterior approach is associated with a quicker, less painful recovery than the supragenicular approach. In the end, the goal of the manuscript was to add one more tool to the box, rather than to identify the ideal approach to the midpopliteal artery for all persons.

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Regarding "Bedside vena cava filter placement guided with intravascular ultrasound"

We read with interest the paper by Dr Ebaugh et al,[1] "Bedside vena cava filter placement guided with intravascular ultrasound" in the July 2001 issue of the *Journal of Vascular Surgery*. Although we agree that the use of intravascular ultrasound (IVUS) for bedside insertion of vena cava filters is feasible, the cost saving is a result of the filter insertion being performed at bedside, not of using the IVUS. We considered IVUS for our bedside IVC filters but found the cost to be prohibitive when compared with using carbon dioxide as a contrast agent. The hospital cost (actual hospital acquisition cost) for a disposable IVUS probe is approximately $600 compared with the disposable hand injection system for carbon dioxide, which is under $65.

Carbon dioxide is safe, particularly because it has no nephrotoxicity. We have also demonstrated its accuracy in determining the caval diameters as well as the caval anomalies (including a duplicated inferior vena cava) even when used at the bedside.[2] Furthermore, using carbon dioxide as a contrast agent, we have inserted fluoroscopically guided bedside inferior vena cava filters using multiple insertion sites (both femoral veins, both subclavian veins, and the right internal jugular vein) with 100% success.

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